

# Comparisons of Job Characteristics

**Focus Occupation:** [Electrical and Electronic Engineering Technicians \(17-3023\)](#)

**Associated Occupation:** [Electronics Engineers, Except Computer \(17-2072\)](#)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

## Knowledge

Similarity of Focus Occupation to Associated Occupation: 89

**Focus Occupation:** Electrical and Electronic Engineering Technicians (17-3023)

**Associated Occupation:** Electronics Engineers, Except Computer (17-2072)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Engineering and Technology	5.7	20.8	12.4	<<	Extensive education and/or training may be required
Design	5.2	20.6	10.2	<<	Extensive education and/or training may be required
Computers and Electronics	8.4	19.7	15.8	<<	Extensive education and/or training may be required
Mathematics	9.2	16.8	11.2	<<	Extensive education and/or training may be required
Physics	4.3	11.6	6.3	<<	Extensive education and/or training may be required
Production and Processing	6.0	11.1	9.2	<	Expanded education and/or training may be required
Mechanical	6.8	9.9	11.6	>	Current knowledge level is likely sufficient
Telecommunications	3.9	7.2	8.4	>	Current knowledge level is likely sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Skills

Similarity of Focus Occupation to Associated Occupation: 85

**Focus Occupation:** Electrical and Electronic Engineering Technicians (17-3023)

**Associated Occupation:** Electronics Engineers, Except Computer (17-2072)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Systems Analysis	6.5	12.5	7.7	<<	Extensive development of skills in this area may be required
Quality Control Analysis	5.9	11.1	8.8	<	A higher skill level may be required
Systems Evaluation	6.4	10.7	7.8	<<	Extensive development of skills in this area may be required

Troubleshooting	4.5	10.0	8.8	<	A higher skill level may be required
Equipment Selection	3.3	9.0	7.0	<	A higher skill level may be required
Repairing	3.4	8.6	8.0	0	Current skill level may be sufficient
Programming	2.2	8.1	3.6	<<	Extensive development of skills in this area may be required
Technology Design	2.6	8.1	4.9	<<	Extensive development of skills in this area may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

Abilities		Similarity of Focus Occupation to Associated Occupation: 97			
Focus Occupation: Electrical and Electronic Engineering Technicians (17-3023) Associated Occupation: Electronics Engineers, Except Computer (17-2072)					
Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Written Comprehension	11.0	14.5	12.0	<	Some improvement in abilities may be required
Information Ordering	9.9	13.3	11.0	<	Some improvement in abilities may be required
Mathematical Reasoning	6.3	12.8	7.8	<<	Extensive improvement in abilities may be required
Category Flexibility	9.0	11.6	9.9	<	Some improvement in abilities may be required
Visualization	7.5	11.0	9.8	<	Some improvement in abilities may be required
Originality	7.6	10.7	8.4	<	Some improvement in abilities may be required
Visual Color Discrimination	6.4	10.7	9.6	<	Some improvement in abilities may be required
Selective Attention	8.7	10.3	9.0	<	Some improvement in abilities may be required
Memorization	5.6	7.6	6.6	<	Some improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common		Similarity of Focus Occupation to Associated Occupation: 89	
Focus Occupation: Electrical and Electronic Engineering Technicians (17-3023) Associated Occupation: Electronics Engineers, Except Computer (17-2072)			
Work Activities		Exclusivity of Activity	
Analyze engineering test data		71	
Analyze technical data, designs, or preliminary specifications		47	
Analyze test data		64	

Calculate engineering specifications	64
Communicate technical information	4
Confer with engineering, technical or manufacturing personnel	25
Confer with vendors	77
Develop plans for programs or projects	31
Draw prototypes, plans, or maps to scale	57
Estimate cost for engineering projects	69
Evaluate engineering data	60
Examine engineering documents for completeness or accuracy	62
Follow manufacturing methods or techniques	73
Follow statistical process control procedures	73
Inspect facilities or equipment for regulatory compliance	51
Prepare technical reports or related documentation	22
Read blueprints	10
Read manufacturing outlines for electronic products	84
Read schematics	34
Read technical drawings	7
Resolve engineering or science problems	46
Test equipment as part of engineering projects or processes	67
Understand detailed electronic design specifications	70
Understand engineering data or reports	48
Use computer aided drafting or design software for design, drafting, modeling, or other engineering tasks	58
Use drafting or mechanical drawing techniques	50
Use electrical or electronic test devices or equipment	40
Use hazardous materials information	35
Use knowledge of laser technology	95
Use machining operations with semiconductor chip forming technology	99
Use robotics systems technology	78
Use scientific research methodology	21
Use technical information in manufacturing or industrial activities	67
Use technical regulations for engineering problems	61

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Tools and Technologies that Both Occupations Have in Common

Similarity of Focus  
Occupation to Associated  
Occupation: 85

**Focus Occupation: Electrical and Electronic Engineering Technicians (17-3023)**  
**Associated Occupation: Electronics Engineers, Except Computer (17-2072)**

Tools and Technologies	Exclusivity
Business function specific software	1
Computers	1
Content authoring and editing software	1
Data management and query software	1
Development software	4

Electrical measuring and testing equipment	7
Electronic and communication measuring and testing instruments	14
Indicating and recording instruments	2
Industry specific software	1
Integrated circuits	18
Light and wave generating and measuring equipment	4
Network applications software	1
Operating environment software	12

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.